



The City of Raleigh

Stormwater Management Advisory Commission

February 2, 2017

3:00 pm

Conference Room 305
Raleigh Municipal Building

3:00 **Welcome, Introductions, Excused Absences**

3:05 **Approval of the Minutes – December 1, 2016 Meeting**

3:10 **Stormwater Staff Report**

- 2017 Environmental Awards Update
- Staffing Update

3:15 **Project Update – Lower Longview Lake Dam**

Gilles Bellot, PE – Project Engineer

Staff will update the Commission on the Lower Longview Lake Dam project, which has been bid and is proceeding quickly toward construction. The purpose of these periodic project updates is to keep the Commission informed of the Stormwater Management Program's progress in delivering projects, particularly "legacy" projects, given the fact that timely project delivery and reduction in capital fund balance is one of the Program's key performance indicators.

3:30 **Project Update – Green Infrastructure/Low Impact Development Implementation**

Kevin Boyer, PE – Water Quality Manager

The City Council recently authorized the broad set of text changes required to implement many of the recommendations within the GI/LID Work Plan. Staff will provide an update to the Commission on the implementation of the GI/LID Initiative, including current status and next steps.

3:45 **Stormwater Utility Fee Credit Manual**

Scott Bryant, PE – Sr Engineer/Strategic Planning

Staff will continue to facilitate a discussion to receive feedback on proposed changes to the Stormwater Utility Fee Credit Manual. Building on the information received from the Commission to date, Staff has developed a number of possible revisions to the current manual. The purpose of this discussion will be to present those revisions and receive guidance from the Commission on the desired path forward.

4:45 **Other Business**

CITY OF RALEIGH
STORMWATER MANAGEMENT ADVISORY COMMISSION (SMAC)
Minutes

Raleigh Municipal Building · 222 W. Hargett Street · Conference Room 305
3:00 p.m. · Thursday, December 1, 2016

Commission Members Present: Matthew Starr (*vice chair*), Ken Carper, Kevin Yates, David Webb, Marc Horstman (*chair*), Evan Kane, Francine Durso, Marion Deerhake, and Chris Bostic.

Stormwater Staff Present: Blair Hinkle, Suzette Mitchell, Kelly Daniel, Lory Willard, Kristin Freeman, Alex Shpik, Veronica High, Justin Harcum, James Pflaum, Lauren Witherspoon, Jen Schmitz, Scott Bryant, Sheila Thomas-Ambat, Carrie Mitchell, Chris Stanley, and Gilles Bellot.

Members Absent: Vanessa Fleischmann

Guest: Natalie Carmen, Christy Perrin, Sujit Ekka, and Mark Senior.

Meeting called to order: 3:03 p.m. by Marc Horstman (*chair*)

Motions: (Absentees and Minutes)

- Absence: Mr. Horstman made a motion to excuse Vanessa Fleischmann from today's meeting and Mr. Starr seconded. The motion was approved unanimously.
- November Meeting Minutes: Mr. Webb made a motion to approve November's meeting minutes and Mr. Horstman seconded. The motion was approved unanimously.

The following items were discussed with action taken as shown.

1. **Stormwater Staff Report:**

- TC-2-16: *The ordinance text change went into effect on Monday, November 28. We are working through some process challenges relating to staff communicating some of the details with their customers. We will be ramping up our efforts with additional public communications (flyers) to close the communication gap.*
- *Next year, we will start providing the Commission with their reappointment dates. Francine Durso second term expires on February 5, 2017.*

2. **Stormwater Quality Cost Share Project – 813 Darby Street:**

Lory Willard informed the Commission she is presenting one project for review. Saint Ambrose Episcopal Church is installing a 516 square foot (sf.) rain garden that will capture runoff from 4,600 sf. of parking lot.

Total Project Cost	\$5,500
Stormwater/City Contribution (75%)	\$4,125
Petitioner Contribution (25%)	\$1,375

Ms. Durso asked what type of role does American Rivers and Water Resources Research Institute (WRRRI) play in this project.

Lory Willard replied that WRRRI is working as an administrator to coordinate the rain garden design and construction, and also as a liaison for the church congregation for community acceptance. American Rivers is providing the grant that covers the petitioner contribution.

Motion:

Mr. Horstman made a motion to approve the Stormwater Quality Cost Share project, and Mr. Yates seconded. The motion was approved unanimously.

3. Stormwater Utility Fee Credit Manual:

Scott Bryant remarked that we had previous discussion with the Commission on the vision in enhancing and expanding the fee credit program. The main objective today is to review the current Stormwater Utility Fee and Fee Crediting Program and discuss potential program enhancements.

SMAC Feedback

- (1) Recommend branding the updated fee crediting program (promotes name recognition, continued awareness, and creates positive repetition).
 - *Focus group*
 - *Program review*
 - *Go to EPA ("Waterwise") and USGS, for an example*
 - *Note monetary benefits*
- (2) Develop an updated and forward looking sustainable "cap" on the total credits available
 - *Building Asset Management (AM) capacity*
 - *Master planning*
 - *Optimization analysis*
- (3) Enhance the crediting program to make it open and available to any/all stormwater utility rate-paying customers for heightened equity and to promote increased participation over time.
 - *Depending on device/credit require a higher level of certification*
 - *Design consideration and vulnerable areas get more incentives based on geographic/watershed*
- (4) Potential integrated components of enhanced fee credit (*preliminary draft framework only*)

4. Fiscal Year 2018 Draft CIP Overview:

Blair Hinkle provided the Commission with an update on the fiscal year 2018 (FY18) Capital Improvement Program (CIP) draft. Since it's in draft form, the numbers are based on program priorities and are likely subject to change.

2018 CIP Summary Highlights

- Lake Preservation [↓100,000] - *Proposing two new projects in FY18 (Upper Durant Lake Stream Restoration Wetland and Wycliff Road Spillway Rehabilitation Project).*
- Water Quality Improvement [↓\$125,000] - *Removed Mulberry Street Wetland; added Cowper Drive SCM Retrofit and maintained Wooten Meadows Park Wetland.*
- General Water Quality [↑\$750,000] - *Dropped funding back from \$250k to \$200k for Stormwater Quality Cost Share; increased Water Quality Retrofit from \$600k to \$1.1M and increased TMDL Streams from \$1M to \$1.4M.*
- Stream Restoration [↑\$225,000] - *Increased funding for Walnut Creek by \$350k (beginning in FY19) and pushed out Capital Boulevard Stream Restoration several years.*
- General Drainage [↑\$1,294,000] - *Successful continued funding for system repairs; ramping up Drainage Assistance funding beginning in FY20; ongoing funding for Flood projects (HMGP/COR Acquisitions); and budgeting for Watershed Master Planning Program.*

- Neighborhood Drainage [↓\$3,680,000] - *Specified projects from general funding and adjusted timing to add high-priority project (Ramblewood).*
- Street Drainage [↑\$1,045,000] - *Added culvert replacements at Dorothea Drive and Dana Drive; Newton Road culvert TPS likely to increase - may be accelerated (currently planned for FY21/22).*
- Challenges:
 - New/Increased Operational Costs - *(Customer Care & Billing: +\$750,000/year; Asset Management: +\$300,000/yr.; Centralized SCM/Dam Maintenance: +\$300,000/year and GI/LID Implementation: +~\$200,000 in FY18)*
 - Total: +~\$1,550,000 in FY18: *(6% of FY17 Projected Revenues)*

Mr. Horstman wanted to know if there are any changes in the proposed budget due to increase bid prices. **Blair Hinkle** replied there are a number of CIP projects that we have increased the numbers and that will be another area of refinement moving forward.

Mr. Webb asked about the revenue side of the budget and if a rate increase would be considered. **Blair Hinkle** said we are not proposing any since we just had one last year.

Kevin Yates questioned if there will be an inflation rate forecast against capital cost or associated engineering/construction type cost. **Blair Hinkle** answered that we are not looking at it in that way yet. As we get into refining the way we do capital planning that will be a piece of it.

Mr. Kane referring to the maintenance shift on the stormwater control measures and dams asked if there would be movement of funds from other departments to stormwater. **Blair Hinkle** replied yes, and that we are looking at what is the most appropriate mechanism of recovering that funding.

Mr. Carper requested a status on the legacy projects. **Blair Hinkle** commented that staff is trying to work quickly on them. He used as an example Simmons Branch/Swift Drive, which was initially budgeted in 2002. Yet, re-designed three times since then and we have it in a final design that didn't take into account a continuation of White Oak Lake. A number of the legacy projects are complex projects and staff is trying to work through them as quickly as possible.

5. **Other Business:**

Mr. Horstman commented that it has been an honor to serve the Commission and the City of Raleigh this past year.

Adjournment:

Mr. Horstman made a motion to adjourn and Kevin Yates seconded. The meeting adjourned at 4:49 p.m.

Suzette Mitchell

MEMORANDUM

To: Blair Hinkle – Assistant Director, Engineering Services

From: Scott Bryant – Sr. Engineer/Strategic Planning

Date: 26 January 2017

Subject: SMAC Workshop #2 - Review of Raleigh's Stormwater Utility Fee Crediting Program



For the February SMAC Workshop, staff will present a working draft framework for potentially updating and enhancing the existing Stormwater Utility Fee Crediting Program. Incorporating potential recommendations to date, an enhanced crediting program would include transitioning from peak discharge control credits only to a more comprehensive and integrated peak control, volume control, and water quality/pollutant control approach. In addition, a revised working draft cap on total credits will be discussed along with an equitable performance-based system of credits – for water quantity and/or water quality controls. Non-structural control measure credits including NPDES could also be maintained and potentially expanded to other approved non-structural measures, albeit at lower credit levels than currently offered. Potential ranges of benefits and impacts from both the existing fee crediting program and a revised program will also be discussed.

Developing a Revised Cap on Total Available Credits

The City's current stormwater utility fee crediting program has an overall cap on credits of 85%. Up to 50% may be achieved for peak discharge control with 20% available for on-site runoff control and up to an additional 30% for off-site runoff control. An additional up to 35% is available for holders of NPDES stormwater permits. Currently, peak flow controls must go beyond the 2- and 10-year events to include management of the 25-year storm in order to qualify for any potential credit. Moreover, there is no additional credit currently available to incentivize managing peaks beyond the 25-year event. Also, as the large majority of stormwater utility rate paying customers do not have a NPDES permit, the effective cap on existing credits is 50% and thus focuses only upon peak discharge control.

Staff has reviewed and discussed the potential range of benefits to and cost savings for public stormwater services and programs offered by the City as a function of effective stormwater management controls that are or could be implemented by property owners that pay a stormwater utility fee. As discussed previously with SMAC, estimating potential benefits and cost savings for the municipality associated with credit-worthy measures and activities by rate-paying customers relies upon information and analysis, collective stakeholder judgment, examination of best practices, and ongoing adaptive program management.

Staff will present and discuss preliminary estimates that indicate a potential cursory range of potential benefits (or cost savings) from credit-worthy measures of approximately 14% to 41%. A working draft revised overall cap on credits is thus currently projected at no more than 50%. Up to 40% would be available for approved structural stormwater management controls whereas up to 10% would be available for NPDES and other approved non-structural control measures.

Working Framework for Enhanced Credits Program

Drawing upon earlier discussions and working potential recommendations, the following draft table captures a preliminary framework for an enhanced fee crediting program. Existing fee credits are compared to proposed fee credits within the table. **Proposed credit percentages are working draft only and subject to additional review and revision prior to final recommendations for decision makers.**

Notably, the program would move from a focus on peak discharge control only to a broader, more integrated view of managing stormwater by incorporating *peak control, volume control, and water quality/pollutant control*. Further, the revised program would equitably allow for *performance-based credits*. While this general performance-based approach would not be unique to Raleigh, it would represent a significant adjustment in how customers may earn varying levels of fee credits.

	Existing Fee Credits	Proposed Fee Credits (DRAFT ONLY)
Structural Controls		
<i>Peak Control</i>		
1-yr, 24-hr	0.0%	1.0%
2-yr, 24-hr	0.0%	2.0%
5-yr, 24-hr	0.0%	3.5%
10-yr, 24-hr	0.0%	5.0%
25-yr, 24-hr	50.0%	10.0%
50-yr, 24-hr	50.0%	12.5%
100-yr, 24-hr	50.0%	15.0%
max.	50.0%	15.0%
<i>Volume Control</i>		
5% annual volume controlled	N/A	1%
10% annual volume controlled	N/A	2%
25% annual volume controlled	N/A	4%
50% annual volume controlled	N/A	8%
75% annual volume controlled	N/A	12%
95%+ annual volume controlled	N/A	15%
max.	N/A	15%
<i>Water Quality/Pollutant Control</i>		
Varies by SCM, examples:		
Green Roof	N/A	10.0%
Bioretention	N/A	9.4%
Sand filter	N/A	9.0%
Rainwater harvesting	N/A	8.5%
Infiltration	N/A	8.4%
Wet Pond	N/A	8.4%
Stormwater Wetland	N/A	8.4%
Permeable Pavement	N/A	8.4%
Other approved SCMs	N/A	varies
max.	N/A	10%
Non-Structural Controls		
NPDES permit	35%	10%
Other approved non-structural	N/A	10%
max.	35%	10%
Total Credit Program Max.	85%	50%

For very preliminary examples of how a new fee crediting approach based upon control measure performance might be applied, staff has examined a handful of properties and projected potential existing and proposed fee credits. These will be reviewed and discussed with SMAC.

For one example site, the following is an existing commercial site on Leesville Church Road with stormwater quality (wetland) and quantity control (pipe detention) measures in place. This site is assumed to satisfy both the typical minimum development requirements in terms of peak control (2- and 10-year control) and nitrogen pollutant control (water quality). Recall that no credit would be available under the existing credit program for beneficial peak discharge control below the 25-year storm event. Also, no credit currently exists for water quality and/or volume controls.

By providing 2- and 10-year peak discharge control and nitrogen control along with an assumed minor credit for volume control, the *estimated potential structural control credit* for this example site under the working draft framework would be estimated at 17.4%. The site does not have a NPDES permit so that credit would not apply. However, it is possible that the owner may also be willing to commit to the menu of non-structural control measures and could earn up to an additional 10% credit for an estimated total fee credit of 27.4%. Note that actual volume control for a stormwater wetland could be lower than that assumed for this illustration. Volume control would typically be higher for measures that provide significant infiltration, facilitate evapotranspiration, and/or promote beneficial rainwater re-use on site.



Summary Key Working Draft Potential Recommendations – For Continued Review and Discussion

1. Transition from an 85% cap on total available credits to 50%. (Up to 40% credit would be available for structural controls whereas up to an additional 10% would be available for non-structural controls.)
2. For a more comprehensive and integrated approach, structural control credits would transition from up to 50% for peak control only to up to 40% for peak control, volume control, and/or water quality control.
3. Structural control measure credits would transition to an equitable performance-based approach, thereby providing credit scaled in accordance with the relative performance level of the given stormwater control(s). This would provide further incentive for higher level controls while recognizing the benefits derived from more typical or lower level controls.
4. The non-structural control credit for holding and implementing a NPDES permit would be maintained although the credit would be reduced from 35% to 10%. Other non-structural control measure credits may be developed going forward such as education, good housekeeping and pollution prevention, drainage system maintenance, and similar controls that would be deemed as beneficial for stormwater management within the community.
5. Potential fee credits for Single-Family Residential continue to be reviewed but are recommended as a later phase (within 1 – 2 years) in enhancing the credits program.
6. Branding the fee credits program also remains a working recommendation with additional information coming in the future.
7. A suite of incentives to further encourage retrofits for existing sites (heightened focus would be upon established sites that have no stormwater control measures but would include any existing site) continues to be reviewed. Working options include the enhanced fee crediting program, actively promoting the Stormwater Quality Cost Share program and allowing ongoing fee credits for measures constructed with cost sharing, implement the “Green Raleigh Review” process to encourage GI/LID control measures, and potentially waiving development plan/permit fees for retrofit sites.